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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.             | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------------|------------------|
| 10/693,774   | 10/24/2003  | Jian He              | 15436.249.35.1                  | 1974             |
| 22913  | 7590        | 07/25/2006           | EXAMINER<br>PETKOVSEK, DANIEL J |                  |
| WORKMAN NYDEGGER<br>(F/K/A WORKMAN NYDEGGER & SEELEY)<br>60 EAST SOUTH TEMPLE<br>1000 EAGLE GATE TOWER<br>SALT LAKE CITY, UT 84111 |             |                      | ART UNIT<br>2874                | PAPER NUMBER     |

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |   |                  |
|------------------------------|---|------------------|
| <b>Office Action Summary</b> | Application No.                                   | Applicant(s)     |
|                              | 10/693,774  | HE ET AL.        |
|                              | Examiner <i>DP-7/17/06</i><br>Daniel J. Petkovsek | Art Unit<br>2874 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on response filed April 28, 2006.  
 2a) This action is FINAL. 2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-36 is/are pending in the application.  
 4a) Of the above claim(s) 19-36 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-3, 5-14 and 16-18 is/are rejected.  
 7) Claim(s) 4 and 15 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on October 24, 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

|  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

This office action is in response to the arguments presented on April 28, 2006. Claims 1-36 are pending (19-36 withdrawn as being related to a non-elected invention).

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 5-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Ono U.S.P. No. 5,473,457.

Ono U.S.P. No. 5,473,457 teaches (ABS; Figs. 1 and 3; column 3, line 31 through column 7, line 14) a system for adjusting losses based upon polarization, the system comprising: a first optical device 1 having an optical output; a second optical device 11 optically coupled to the first optical device; and a polarization controller 9 optically coupled to both said first optical device and said second optical device, said polarization controller minimizing loss by adjusting a polarization state of said optical output of said first optical device to reduce a total polarization-dependent loss of said first and second optical devices, which clearly, fully meets Applicant's *claimed* limitations for independent claims 1 and 8.

Regarding claims 5 and 9, and intensity detector 17 measures the loss(es) as such from the coupler.

Regarding claims 6, 7, 10, and 11, the optical devices can be sources, waveguides, couplers, detectors, etc. (see Figs. 1 and 3).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 3, 12-14 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono U.S.P. No. 5,473,457.

Ono U.S.P. No. 5,473,457 teaches (ABS; Figs. 1 and 3; column 3, line 31 through column 7, line 14) a system for adjusting losses based upon polarization, the system comprising: a first optical device 1 having an optical output; a second optical device 11 optically coupled to the first optical device; and a polarization controller 9 optically coupled to both said first optical device and said second optical device, said polarization controller minimizing loss by adjusting a polarization state of said optical output of said first optical device to reduce a total polarization-dependent loss of said first and second optical devices.

Ono '457 does not explicitly teach that the controller comprises at least one fiber optic *cable* loop contained in a "petal". (claims 2, 3, and 12-14). Ono '457 teaches elements of the control system that are optical fiber loops (8 and 10). A person having ordinary skill in the art at the time the invention was made would have recognized that the only difference between an optical fiber and an optical fiber *cable* would be a protective sheath/jacket. Adding a protective jacket or sheath to the fiber (and containing it within a petal) would have been obvious to a person having ordinary skill in the art at the time the invention was made since protecting an

optical fiber would inherently improve its optical coupling and decrease error/loss. It is noted that "petal" can be read on by any protective/enveloping feature.

Regarding claim 16, and intensity detector 17 measures the loss(es) as such from the coupler.

Regarding claims 17 and 18, the optical devices can be sources, waveguides, couplers, detectors, etc. (see Figs. 1 and 3).

#### *Claim Objections*

5. Claims 4 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The relevant prior art of record does not teach or reasonably suggest including optical fiber cable loops within a petal in combination with having "said petals can be rotated about an axis that is parallel to a direction of travel of a light signal passing through said first and second optical device to adjust said polarization dependent loss". The prior art of Ono '457 does not teach or reasonably suggest this rotation feature.

#### *Response to Arguments*

6. Applicant's arguments filed April 28, 2006 have been fully considered but they are not persuasive.

Applicant adds emphasis on page 7, lines 20-28 by bringing to attention that the Examiner has provided a reference to the entire specification. However, it is respectfully submitted that the cited portions of the specification are 3 pages in length and fully relevant to the claimed limitations, which should not be an undue burden for Applicant to peruse. The

Examiner apologizes for any inconvenience this may have caused. However, this point is moot, since the Ono '457 still meets the requirements of 35 U.S.C. 102(b) for the following reasons.

Applicant traverses the rejections to Ono '457 by asserting that the Examiner has failed to identify elements that correspond to the claimed limitations. In regard to "optical output", it is noted that any "output" of the 1<sup>st</sup> optical device is an "optical output", and this output may continue throughout the optical system, even if it is modified. In regard to "a polarization state", it is inherent from the art of Ono '457 that the optical signal has a "polarization state". In regard to "a total polarization dependent loss", the polarization controller, fibers, and optical amplifiers help maintain and control the polarization dependent loss of the optical signal, which are directly related to both the 1<sup>st</sup> and 2<sup>nd</sup> optical elements. In regard to "output of said second optical device", this device inherently has an output, and intensity detector 17 measures this loss. It is reminder that the Examiner can only read the broadest reasonable interpretation of *claimed* subject matter. Broadly, decreasing polarization loss in the optical signal reduces this amount in the optical devices.

In response to Applicant's request for an Examiner affidavit, the Examiner asserts that the rejection was not based upon personal knowledge, but what one having ordinary skill in the art would have recognized at the time the invention was made as being an obvious modification in view of the art of Ono '457.

It is noted that claims 4 and 15 have been indicated as having allowable subject material. The Examiner does not assert that claims 4 and 15 are the *only* limitations that could make the independent claims allowable. However, the Examiner asserts that these limitations would make

the independent claims allowable over the Ono '457 reference, if incorporating each element from claims 4 and 15 therein.

*Conclusion*

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Petkovsek whose telephone number is (571) 272-2355. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2874

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Daniel Petkovsek  
July 17, 2006

  
SUNG PAK  
PRIMARY EXAMINER